

CLAIMS

What is claimed is:

- 5 1. A furcated bone screw, comprising:
 - a shaft having a first end and a second end;
 - a screw thread circumnavigating the shaft; and
 - a plurality of elongate slots longitudinally formed in the shaft from the secondend and creating a plurality of furcated branches;
- 10 wherein the plurality of branches are plastically deformed radially outwardly from a first screw diameter to a relatively larger second circumferential diameter and are compressible to the first screw diameter without plastic deformation.
- 15 2. The furcated bone screw of claim 1, wherein the plurality of furcated branches can compress to the first screw diameter state when furcated bone screw is initially positioned at the opening of a hole.
- 20 3. The furcated bone screw of claim 1, wherein the plurality of furcated branches return to the second circumferential diameter upon reduction of a radially compressive force.
- 25 4. The furcated bone screw of claim 1, wherein the plurality of furcated branches extend for a distance of at least half of the length of the shaft.
5. The furcated bone screw of claim 1, wherein the screw thread extends from the second end of the shaft at least substantially to the first end of the shaft.
6. The furcated bone screw of claim 1, further comprising a screw head disposed at the first end of the shaft.
- 30 7. The furcated bone screw of claim 1, further comprising a driver disposed at the first end of the shaft.

8. The furcated bone screw of claim 1, wherein the plurality of furcated branches comprises three branches.
- 5 9. The furcated bone screw of claim 1, wherein the plurality of furcated branches have sufficient flexibility such that the plurality of branches are compressible by a user.
10. The furcated bone screw of claim 1, wherein the furcated bone screw is formed at least partially by titanium.
- 10 11. A furcated bone screw, comprising:
a shaft having a first end and a second end;
a screw thread circumnavigating the shaft; and
a plurality of elongate slots longitudinally formed in the shaft from the second
15 end and creating a furcated means;
wherein the furcated means extend radially outwardly and are compressible.
12. The furcated bone screw of claim 11, wherein the furcated means can compress from a circumferential diameter at the radially outwardly configuration to a relatively
20 smaller screw diameter when the furcated bone screw is initially positioned at the opening of a hole.
13. The furcated bone screw of claim 11, wherein the furcated means can return to a radially expanded state upon reduction of a radially compressive force acting on the
25 furcated means.
14. The furcated bone screw of claim 11, wherein the furcated means are formed along at least half of the length of the shaft.
- 30 15. The furcated bone screw of claim 11, wherein the screw thread extends from the second end of the shaft at least substantially to the first end of the shaft.

16. The furcated bone screw of claim 11, further comprising a screw head disposed at the first end of the shaft.
- 5 17. The furcated bone screw of claim 11, further comprising a driver disposed at the first end of the shaft.
18. The furcated bone screw of claim 11, wherein the furcated means comprises a plurality of furcated branches.
- 10 19. The furcated bone screw of claim 11, wherein the furcated means have flexibility such that the furcated means are compressible by a user.
20. The furcated bone screw of claim 11, wherein the furcated bone screw is formed at least partially by titanium.
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